

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Carrier Current Systems, including Broadband)	ET Docket No. 03-104
over Power Line Systems)	
)	
Amendment of Part 15 regarding new)	
requirements and measurement guidelines for)	ET Docket No. 04-37
Access Broadband over Power Line Systems)	

COMMENTS OF THE
CONSUMER ELECTRONICS ASSOCIATION

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The Consumer Electronics Association (“CEA”)¹ respectfully submits these Comments addressing proposals made in the Commission’s Notice of Proposed Rulemaking (“*Notice*”) in the above captioned proceeding to amend rules to adopt new requirements and measurement guidelines for a new type of carrier current system that provides access to broadband services using electric utility companies’ power lines. We applaud the Commission’s efforts to advance the deployment of broadband while protecting licensed radio services from potential interference.

I. Introduction

The Consumer Electronics Association is the principal U.S. trade association of the consumer electronics and information technologies industries, including manufacturers of

¹ Our members design, manufacture, distribute and sell a wide range of consumer products in addition to digital and analog television receivers, monitors, and associated devices such as video cassette recorders, direct broadcast satellite radio (DARS) and television (DBS) equipment, broadcast AM and FM radios, and unlicensed devices such as cordless phones, baby monitors, and wireless headsets. CEA’s more than 1,800 companies include all of this country’s major consumer electronics manufacturers and retailers.

television receivers, monitors, and associated equipment such as set-top boxes, personal video recorders (PVRs), video cassette recorders (VCRs) and DVD players that bring the video marketplace into consumers' homes. Our members also design and manufacture a broad array of unlicensed devices, including Wi-Fi and similar equipment that increasingly will be used to network throughout the home audio and video equipment such as television sets and monitors with video delivery services such as cable, DBS, and over-the-air broadcast as well as personal computers and broadband internet access.

CEA believes that market-driven facilities-based competition is the best way to promote rapid deployment of broadband technologies and increase consumer demand. Additionally, the open and unfettered consumer access to content, service, and applications that has fueled the growth of the Internet must be preserved. Therefore, the Commission's policies for broadband transmission service must promote ubiquitous broadband penetration and ensure that consumers maintain access to the full benefits of the Internet and unrestricted use of their full bandwidth.

II. Access Broadband Over Power Line Will Advance the Deployment and Adoption of Broadband

In its *Notice of Proposed Rulemaking*,² the Commission proposes to amend part 15 rules to adopt new requirements and measurement guidelines for "access broadband over power line" service or Access BPL. CEA believes that adopting these rules permitting Access BPL will advance the deployment and adoption of broadband.

² Carrier Current Systems, including Broadband over Power Line Systems, Amendment of Part 15 regarding new requirements and measurement guidelines for Access Broadband over Power Line Systems, ET Docket Nos. 03-104, 04-37, FCC 04-92 Notice of Proposed of Rulemaking (*"Notice"*) released Feb. 23, 2004

Market-driven facilities-based competition is a key element in stimulating consumer adoption of broadband. Access BPL advances this goal by providing an alternative service provider to consumers. Power lines reach virtually every community, urban and rural, homes and businesses, churches and schools. Because of this reach, Access BPL has great potential to provide “last mile” broadband service nationwide. In addition to providing consumers more choice in broadband service providers, it would also work to bridge the digital divide by supplying service to rural communities currently not serviced by other providers.

II. Access BPL will Advance and Spur New Innovation

In its *Notice*, the Commission explains that in-house BPL systems use the electrical outlets available within a building to transfer information between computers and other home electronic devices, eliminating the need to install new wires between devices³. Because of this ease of installation and use, we believe that Access BPL will advance consumer use of new technologies and products, such as home network systems. It will also spur new innovations, as entrepreneurs will have a new source to connect broadband to devices throughout the home.

III. Maintaining Existing Part 15 Emission Limits for Access BPL

To protect existing licensed spectrum users, the Commission proposes to amend part 15 rules to include Access BPL and to require this service to comply with existing part 15 emission limits⁴. CEA agrees that the use of existing limits for intentional radiators in

³ *Notice* at ¶ 3

⁴ *Notice* at ¶ 33

15.209 is an appropriate regime for Access BPL.⁵ These limits have served adequately for years to protect both licensed and unlicensed services. There is no justification for, and indeed much risk in, limits any higher than currently allowed for part 15 devices. Further, CEA agrees with the proposed change to 15.109 (e) that requires BPL to comply with the Class B limits of 15.109 (a) on all low-voltage lines from the distribution transformer to the building⁶. This addition provides an important protection to keep Access BPL devices from operating at Class A limits in close proximity to consumers' devices.

Under the FCC's proposed rules, however, it appears that Access BPL systems operating above 30 MHz are allowed to radiate at Class A limits.⁷ These limits were established with the idea that Class A devices would not generally be operated in close proximity to consumer electronics equipment in a residential environment. Since Access BPL systems will in effect immerse consumers' Class B devices, including television receivers using directional antennas, the Commission should not authorize Access BPL systems to transmit in the broadcast bands. In particular, the agency should not allow Access BPL operations in the lower VHF band because of the serious risk of interference to television channels 2-6.

The Commission has recognized that the lower VHF channels "are subject to a number of technical penalties, including higher ambient noise levels due to *leaky power lines*, vehicle ignition systems, and other impulse noise sources...."⁸ Given that the lower VHF

⁵ See 47 C.F.R. §§ 15.109, 15.209 & 15.33. The applicable radiated limits are contained in Section 15.209 for frequencies below 30 MHz and Section 15.109 for frequencies above 30 MHz. To determine compliance with the radiated emission limits, if the highest frequency generated or used in the device, or on which the device operates or tunes is 10 MHz, the upper frequency to be examined is 500 MHz.

⁶ Notice at Appendix B (4)

⁷ *Id.*

⁸ *Sixth Report and Order*, 12 FCC Rcd 14588 (1997) at ¶82 (emphasis added).

band is already heavily polluted with man-made impulse type background interference, allowing Access BPL systems to operate in the lower VHF band will only exacerbate an already existing interference problem. Although this increase in interference would adversely affect both analog and digital receivers, the disruption to viewers would be much more significant in the digital context, where interference would result in a complete loss of picture (rather than a snowy picture as in the analog environment). Thus, to ensure that the nation's conversion to digital television is kept on track and the public's access to free over-the-air television service remains clear of any interfering signals, CEA urges the Commission not to allow Access BPL operations in the television broadcast bands.

The Commission also proposes adding a paragraph (e) to the conducted limits found in 15.107 that would eliminate the requirement for Access BPL systems to comply with paragraphs (a) and (b).⁹ It is our understanding that the FCC intends to remove all conducted limits for Access BPL and rely solely on radiated limits for protection in the AM broadcast band. This change is intended to address the safety issue of making conducted measurements on equipment attached to medium-voltage power lines. However, the proposed change exempts all Access BPL systems, including any components attached to the low-voltage side of the distribution transformer. Access BPL components attached to the low-voltage lines should be subject to the 1000 microvolt conducted limit in the AM band found in 15.107 (c) (2). CEA does not believe that any Access BPL system should intentionally transmit in the AM band, and such systems should, in fact, meet the 1000 microvolt conducted limit, even if these systems are not required to demonstrate compliance *in situ*.

⁹ Notice at Appendix B (3)

The Commission also asks whether existing Access BPL systems should be brought into compliance with the proposed rules¹⁰. CEA does not believe this is necessary for most aspects of the new rules. However, Access BPL operators should be required to include all systems, even systems currently deployed, in the proposed notification requirements of 15.109 (g).

Further, with respect to this new notification requirement¹¹, CEA believes it is prudent to include the power spectral density mask that represents the maximum power transmitted by the system for any given frequency in addition to the location, modulation, and frequency band requested by the FCC. This information would allow better understanding of the interference environment and potential for widespread problems, should isolated interference cases be found.

The Commission asks about antenna height among other measurement issues.¹² CEA believes that the Commission should require at least some measurements with antennas placed at the height of the overhead lines for Access BPL systems. It is easy to imagine consumer equipment, including broadcast TV or other antennas, in or on a house at the same height or higher than nearby power lines. Requiring some Access BPL measurements to be made in the same horizontal plane with the overhead lines ensures that proper radiation limits are met.

IV. Conclusion

CEA applauds and supports the efforts of the Commission, which will advance for the deployment of Access BPL. By supplying another source of broadband, consumers

¹⁰ Notice at ¶ 42

¹¹ Notice at ¶43

¹² Notice at ¶ 46

will have more choice in broadband service providers, a key element in advancing the adoption of broadband. We support the amendments to part 15 rules to include Access BPL. However, we respectfully urge the Commission not to authorize the use of the television broadcast bands by Access BPL.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Michael Petricone', written over a horizontal line.

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